XVI.—*Description of a supposed new Genus of Ceylon Batrachians.* By W. Ferguson, F.L.S.*

Trachycephalus.

Fingers and toes tapering, very slightly webbed. Lower jaw with marked but not prominent apophyses, with a small fang-like process in the centre; the internal openings of the nostrils and Eustachian tubes small; tympanum small, but conspicuous. Small parotoids present? The transverse processes of the sacral region dilated. (Maxillary and vomerine teeth present.) Vomer with two separate toothed prominences. A toothed prominence on each side between the choanæ and the jaw. The upper eyelid well developed, but not prominent. A cutaneous fold between the fore and hind limbs.

Trachycephalus ceylanicus.

Head very broad, much depressed, and very short in proportion to its breadth, the upper lip having a marked rim all along it, forming nearly a section of a circle, somewhat convex in front; the whole of the upper part of the head, including the eyelids and the tympanic region, covered with small, irregular, granular tubercles. Snout considerably pointed, with its extremity prominent and perpendicularly truncated, and very slightly overreaching the cleft of the mouth. Canthus rostralis obtuse; loreal region concave, with a smooth groove running through it from the lower part of the orbit to the nostril. Occiput deeply concave. Nostril slightly below the extreme end of the canthus rostralis and the snout. Eye of moderate size, prominent, but concealed from above by the eyelid. Tympanum distinct, one half as large as the eye. A linear fold runs from the hinder edge of the orbit over the tympanum towards the armpit. Cleft of the mouth twice as broad as long; tongue not large, broadly but not deeply notched behind, attached to the gullet nearly its whole length. There is a toothed prominence on each side of the vomer, a little lower than the openings of the nostrils, and running in a straight line across the jaw. Vomerine teeth on long ridges gradually rising from the inner angle of the choanæ, running back and convergent behind, terminating in toothed prominences. Skin of the back, belly, throat, legs, and inside of fore limbs smooth. The whole of the upper part of the head (including the eyelids), the front of the fore limbs, and a re-

* From the 'Journal of the Ceylon Branch of the Royal Asiatic Society,' 1874, Part 1. Communicated by the Author.

markable cutaneous expansion on the side of the trunk between the fore and hind limbs covered with granule-like tubercles, with a few smaller ones on the tympanum. The smooth portion of the skin of the back is separated from the rough head by a somewhat elevated ridge, caused by a depression of the head, and running in a line across just behind the orbits, and continued into the linear fold behind the tympanum, a good deal like that in the adult *Rana Kuhlii* figured by Dr. Günther, 'Indian Reptiles,' t. xxvi. fig. A. Limbs of moderate length; the length of the body two tenths of an inch longer than the distance of vent from heel. The third finger is about one tenth of an inch longer than the fourth, which is slightly longer than the second; these three fingers form a palmated group in advance of the first, and are very slightly webbed. First finger about half the length of the third. Metatarsus with a small tubercle below the first toe. The fourth toe (including the metatarsus) is exactly one half the length of the body; the third toe is slightly longer than the fifth; a very short web between the first, second, third, and fourth toes only; the fifth appears to be quite free.

Upper parts (in spirits) dark brown, with lighter-coloured spots; outer parts of hind and fore limbs clouded with brown; inner sides and the cutaneous expansion coloured dark grey, with small brown spots; belly dark livid colour; throat suffused with brown.

The following are the dimensions of the only specimen in my possession—length of body 1·8, vent to heel 1·6, hind limbs 2·8, fourth toe (including the metatarsus) 0·9 inches.

I do not know any frog with which to compare this one in its general appearance and character. It is one of a few set aside from my collection by Major Beddome, when on a visit to Colombo lately, and pronounced by that gentleman to be new to science, and which, from a feeling of delicacy, he declined to accept from me. In searching for its place in the synoptical list of the characters of the genera of Batrachians given in page 400 of Günther's work on Indian Reptiles, I felt that it could scarcely be removed from the first division, *b*, of the group of Ground-Frogs; and it seemed most closely allied to the genus *Xenophrys*, of which one species, *X. monticola*, is described and figured by Günther in the work referred to, p. 414, and plate xxvi. fig. H.

In the generic and specific descriptions which I have given for this supposed new Ceylon frog, I have followed the exact order of Dr. Günther's description of the Indian frog above referred to, to facilitate comparisons between the two.

The generic descriptions of *Xenophrys* and *Trachycephalus*

(rough head) are in many respects so similar that it is not unlikely the former may be so amended as to include the Ceylon frog; but the very distinct aspects of the two, and some remarkable differences more fully given in the specific description, have induced me to include our Ceylon frog in a new genus with a name indicating its singular *rough head*.

In page 85 of the 'Proceedings of the Asiatic Society of Bengal' for March 1870, the late Dr. Jerdon, in the following extract from his "Notes on Indian Herpetology," has shown that vomerine teeth are present in the genus *Xenophrys*:—"I obtained numerous specimens of *Xenophrys monticola*, Günther, both at Darjeeling and the Khasi hills; it has distinct vomerine teeth, which Günther was unable to detect in the specimens of the British Museum. I also obtained five specimens of a larger species of *Xenophrys* both in Sikim and the Khasi hills, which I propose describing as *Xenophrys gigas*."

It is very likely that, if these specimens of the undescribed species referred to exist, it may be found that they have peculiarities of structure connecting them with *Xenophrys monticola*, Günther, and our Ceylon frog.

I regret to say that I have only one specimen of this supposed new frog, and that I am not certain as to where it was found, though I believe I caught it on the sides of a stream near Hewisse, in the southern portion of the Western Province, and famous as one of Mr. Thwaites's best botanical districts. I regret also to state that, like many of the earlier frogs caught by me, this one was put into strong spirits, which have shrivelled it up to a certain extent. It is very thin and flat in proportion to its size; and I doubt not that, like species of *Hylorana*, it is a powerful leaper. In the specific description given I have tried not to omit a single character which might assist in the identification of this frog.

The interdigital membrane connecting the first, second, third, and fourth toes is just perceptible; but I have no doubt that in newly caught specimens it will be found quite distinct.

I have marked the presence of *parotoids* with a query, thus (?), because I am not certain whether the slight enlargements behind the orbits are parotoids or not.

Writing about *Rana Kuhlii*, Schl., of Ceylon, W. Theobald, junr., Esq., in his Catalogue of Reptiles in the Museum of the Asiatic Society of Bengal, makes the following very appropriate remarks, which are equally applicable to all the Indian and Ceylon Batrachians and the Geckotidæ:—"There are no reptiles in India in such a confused state as the Ranidæ; and I can add but little towards disentangling the shadowy species, real enough perhaps, but not as yet characterized. The series

in the Museum is a very poor one; and the Ranidæ from all parts of India must be assiduously collected before sound results can be obtained. Let us hope that an urgent appeal for frogs from all parts of India [and Ceylon, W. F.] will be liberally responded to by local naturalists and collectors, without which aid the subject must long remain in its present unsatisfactory state. Each contributor should not send merely the most conspicuous frogs from his neighbourhood, but all the species and varieties he can procure."

As an illustration of the liability to add to and perpetuate the confusion connected with some of the frogs and other reptiles, I may refer to a rare Ceylon frog found first on Adam's Peak several years ago by Dr. Schmarda, Professor of Zoology in the University of Prague. On a fly-sheet after page 21 of the second part of Dr. Kelaart's 'Prodromus of the Faunæ of Ceylon,' published in 1853, this frog is very briefly described by the late Dr. Kelaart under the following name, "*Polypedates* (?) *Schmarda*, n. s. nobis"—the "*Schmarda*" being no doubt a slip of the pen for "*Schmardana*," under which latter name, and under the genus *Ixalus*, Günther refers to this then doubtful frog in his 'Indian Reptiles,' p. 433. Theobald, in his Catalogue referred to, p. 85, gives this frog as follows:—"*Polypedates smaragdinus*, Kelaart; Ceylon. Eyebrows armed with spines. Limbs studded with tubercular sharp-pointed spines. A very peculiar species, and probably a distinct generic form." Jerdon, in the paper referred to, pp. 83, 84, and Anderson, in his list of accessions to the collection of reptiles in the Indian Museum since 1865, refer distinctly to an Indian frog described by Blyth in footnote to p. 48 of Appendix to Kelaart's 'Prod. Faun. Zeyl.' as the *Polypedates smaragdinus*, found on the Khasi hills. The specific name here means *emerald-green*; and Mr. Theobald's *P. smaragdinus* ought to have been *P. Schmardana*. On page 85 of the 'Annals and Magazine of Natural History' for January 1872, containing "Descriptions of some Ceylonese Reptiles and Batrachians" by Dr. Günther, this frog is finally, and I suppose properly, named, though not yet described, as *Ixalus Schmardanus* (Kelaart).

XVII.—*On the Genus* Deidamia, v. W.-S. By James Wood-Mason, of Queen's College, Oxford.

At the last meeting of the Asiatic Society of Bengal, held on the 5th of August last, I drew attention to the fact that a Crustacean precisely similar in general structure to several